

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method, comprising:
loading a virtual machine monitor into a system memory;
using the virtual machine monitor as a proxy agent for firmware and an operating system ("OS") runtime and installation to a data storage unit ("DSU") coupled to the system memory, wherein the DSU and the system memory are included on a same hardware platform;
using the virtual machine monitor to intercept a request to write new data to a location on the DSU;
using the virtual machine monitor to save a copy of old data currently residing at the location on the DSU to enable restoration of the old data to the location on the DSU; and
using the virtual machine monitor to write the new data to the location on the DSU;
setting a watchdog timer to a finite period;
rebooting the operating system; and
if a specified event does not reset the watchdog timer prior to expiration of the finite period, using the old data to reboot the operating system.

2. (Original) The method of claim 1, further comprising restoring the old data to the location using the saved copy of the old data to rollback the DSU to a previous state.

3. (Currently Amended) The method of claim 2, further comprising:

generating a recovery screen asking a user whether to restore the previous state in response to the expiration of the finite period if a specified event does not occur, ~~encountering a system error.~~

4. (Original) The method of claim 2, wherein saving the copy of the old data further comprises saving the copy of the old data with a time marker to enable rollback of the DSU to a known good state.

5. (Original) The method of claim 4, further comprising:
saving multiple versions of the old data correlated with time markers to enable rollback of the DSU to one of multiple previous states.

6. (Original) The method of claim 5, further comprising:
pruning versions of the old data having an expired time marker.

7. (Previously presented) The method of claim 2, wherein saving the copy of the old data comprises saving the copy to a reserved area of the DSU hidden from the operating system ("OS").

8. (Canceled).

9. (Currently Amended) A method, comprising:
loading a virtual machine monitor into a system memory;

using the virtual machine monitor as a proxy agent for firmware and an operating system runtime and installation to a data storage unit ("DSU") coupled to the system memory, wherein the DSU and the system memory are included on a same hardware platform;

using the virtual machine monitor to intercept a request to write new data to a first location on the DSU;

using the virtual machine monitor to save the new data to a second location different from the first location; and

leaving old data currently stored at the first location to enable rollback of the DSU to a previous state;

setting a watchdog timer to a finite period;

rebooting the operating system; and

if a specified event does not reset the watchdog timer prior to expiration of the finite period, using the old data to reboot the operating system.

10. (Original) The method of claim 9, further comprising
intercepting a request to read the first location of the DSU;
determining whether the new data corresponding to the first location is currently saved at the second location; and
diverting the request to read the first location to the second location.

11. (Original) The method of claim 10, wherein saving the new data to the second location further comprises saving an address of the first location along with the new data at the second location.

12. (Original) The method of claim 11, wherein the second location is located within a reserved area of the DSU hidden from an operating system loaded from a partition of the DSU.

13. (Original) The method of claim 12, wherein determining whether the new data corresponding to the first location is currently saved at the second location comprises searching the reserved area for a match between a read address of the request to read the first location and the address of the first location saved along with the new data at the second location.

14. (Original) The method of claim 9, further comprising rolling back the DSU to the previous state by:

deleting the new data written to the second location; and

directing the request to read the first location to the first location.

15. (Currently Amended) A machine-accessible medium that provides instructions that, if executed by a machine, will cause the machine to perform operations comprising:

loading a virtual machine monitor into a system memory included in the machine;

using the virtual machine monitor as a proxy agent for firmware and an operating system runtime and installation to a data storage unit ("DSU") coupled to the system memory;

using the virtual machine monitor to intercept a request to write new data to a location on the DSU;

using the virtual machine monitor to save a copy of old data currently residing at the location on the DSU to enable restoration of the old data to the location on the DSU; ~~and~~

using the virtual machine monitor to write the new data to the location on the DSU;
setting a watchdog timer to a finite period;
rebooting the operating system; and
if a specified event does not reset the watchdog timer prior to expiration of the finite
period, using the old data to reboot the operating system.

16. (Original) The machine-accessible medium of claim 15, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising:

restoring the old data to the location using the saved copy of the old data to rollback the DSU to a previous state.

17. (Original) The machine-accessible medium of claim 16, wherein saving the copy of the old data further comprises saving the copy of the old data with a time stamp to enable rollback of the DSU to a known good state.

18. (Original) The machine-accessible medium of claim 17, wherein saving the copy of the old data further comprises saving the copy of the old data with an address of the location to enable restoring the old data to the location.

19. (Previously presented) The machine-accessible medium of claim 15, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising:

executing the operating system ("OS") within a virtual machine; and
proxying access to the DSU with a virtual machine monitor ("VMM"), wherein the VMM intercepts the request to write the new data and saves the copy of the old data to a reserved area hidden from the OS.

20. (Currently Amended) A machine-accessible medium that provides instructions that, if executed by a machine, will cause the machine to perform operations comprising:

loading a virtual machine monitor into a system memory;

using the virtual machine monitor as a proxy agent for firmware and an operating system runtime and installation to a data storage unit ("DSU") coupled to the system memory, wherein the DSU and the system memory are included on a same hardware platform;

using the virtual machine monitor to intercept requests to write new data to write locations within a first portion of the DSU;

using the virtual machine monitor to save the new data to a reserved area not including the first portion; ~~and~~

leaving old data currently stored at the write locations to enable rollback of the DSU to a previous state;

setting a watchdog timer to a finite period;

rebooting the operating system; and

if a specified event does not reset the watchdog timer prior to expiration of the finite period, using the old data to reboot the operating system.

21. (Original) The machine-accessible medium of claim 20, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising:

intercepting a request to read a read location within the first portion;

determining whether any of the new data saved within the reserved portion corresponds to the read location; and

providing a corresponding portion of the new data in response to the request to read the read location, if some of the new data saved within the reserved area is determined to correspond to the read location.

22. (Original) The machine-accessible medium of claim 21, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising:

providing data saved at the read location within the first portion in response to the request to read the read location, if none of the new data saved within the reserved area is determined to correspond to the read location.

23. (Original) The machine-accessible medium of claim 22, wherein saving the new data to the reserved area further comprises saving the new data to the reserved area along with addresses of the corresponding write locations and wherein determining whether any of the new data saved within the reserved portion corresponds to the read location comprises comparing the addresses saved within the reserved area to a read address of the read location.

24. (Original) The machine-accessible medium of claim 20, further providing instructions that, if executed by the machine, will cause the machine to perform further operations, comprising
deleting the new data saved to the reserved area to rollback the DSU to a known good state.

25. (Currently Amended) A system, comprising:
a processor to execute instructions;
a hard disk drive ("HDD") to save old data and new data; and
non-volatile memory accessible by the processor and having the instructions stored thereon, which if executed by the processor, will cause the processor to perform operations comprising:
loading a virtual machine monitor into a system memory coupled to the HDD and located on a same hardware platform as the HDD;
using the virtual machine monitor as a proxy agent for firmware and an operating system runtime and installation to the HDD;
using the virtual machine to intercept a request to write new data to a write location on the HDD;
using the virtual machine to save a copy of old data currently residing at the write location on the HDD to enable restoration of the old data to the write location on the HDD; and
writing the new data to the write location on the HDD;
setting a watchdog timer to a finite period;

rebooting the operating system; and

if a specified event does not reset the watchdog timer prior to expiration of the
finite period, using the old data to reboot the operating system.

26. (Original) The system of claim 25 wherein the non-volatile memory further includes instructions stored thereon, which if executed by the processor, will cause the processor to perform further operations comprising:

restoring the old data to the write location using the saved copy of the old data to rollback the HDD to a previous state.

27. (Original) The system of claim 25 wherein saving the copy of the old data currently residing at the write location comprises saving the copy of the old data with a time marker and an address of the write location to enable rollback of the HDD to a known good state.

28. (Original) The system of claim 27 wherein saving the copy of the old data currently residing at the write location further comprises saving the copy to a reserved area of the HDD hidden from an operating system saved on the HDD.

29. (Original) The system of claim 25 wherein the HDD comprises the non-volatile memory.

30. – 33. (Canceled).